ACV Data Technical Assessment: Instructions

We have included some synthesized data containing “buyers” and ”sellers” with their date of joining an auction service and a summary statistic of the number of auctions they have engaged with per month in their first 3 months since joining. These data are in the attached zip file. **You have 2 hours to complete the task.**

The assessment will provide a topic of discussion in the interview and gauge your comfort level with doing analysis and working with Python for data science.

The task : you are a consultant and are given a data set with a request to “Help us understand where we are and what we can expect given what the data says”

1. Analyze data. Especial interest is in how your munging and visualizations leads you to define the structure for your analysis.
2. Create and evaluate models to predict user future engagement for **both users and auctions_engaged.** Choose models and metrics that make sense, given the data.

You have 2 hours, so choose something you can complete in that time. The primary goal is for us to understand your thoughts, processes, and code choices in building and evaluating your classifiers against the data given. Our focus will be on your code, your comments, and any output of your code.

- Use Python (standard python data-science stack : pandas/numpy/scipy/sklearn...)
- All work must be done in and shown in a Jupyter Notebook
- Use markdown and/or in-line comments to show your thought process
- Show us the code and process for creating your work
    - Keep as much of code production ready, where time permits
    - Evaluate your work
- Answer in the last part (use paragraphs):
    - Describe what you can of the marketplace this data represents
    - Explain if and why one model is better than the other
    - Explain your choices for evaluation

How will you be evaluated

- Quality of code
- Clarity in reasoning
- Validity and performance of the model
- How much was done in the 2 hours allotted

Deliverables

- Your Jupyter notebook showing all of your work
- A static HTML file (downloaded output) of your notebook
    - So I don’t have to run your notebook to see your work
- List of any required dependencies needed to run your notebook